CLAIMS

1. An anisotropically conductive connector comprising an elastic anisotropically conductive film, in which a plurality of conductive parts for connection extending in a thickness-wise direction of the film have been formed,

wherein the elastic anisotropically conductive film has initial properties that supposing that the total number of the conductive parts for connection is Y, an electric resistance of the conductive part for connection in a state that a load of Y x 1 g has been applied to the elastic anisotropically conductive film in a thickness-wise direction thereof is R_{1g}, and an electric resistance of the conductive part for connection in a state that a load of Y x 6 g has been applied to the elastic anisotropically conductive film in the thickness-wise direction is R_{6g}, the number of conductive parts for connection that a value of R_{1g} is lower than 1 Ω is at least 90% of the total number of the conductive parts for connection, the number of conductive parts for connection that a value of R_{6g} is lower than 0.1 Ω is at least 95% of the total number of the conductive parts for connection, and the number of conductive parts for connection that a value of R_{6g} is at least 0.5 Ω is at most 1% of the total number of the conductive parts for connection.

2. An anisotropically conductive connector suitable

for use in conducting electrical inspection of each of a plurality of integrated circuits formed on a wafer in a state of the wafer, which comprises:

a frame plate, in which a plurality of anisotropically conductive film-arranging holes each extending in a thickness-wise direction of the frame plate have been formed correspondingly to electrode regions, in which electrodes to be inspected have been arranged, in all or part of the integrated circuits formed on the wafer, which is an object of inspection, and a plurality of elastic anisotropically conductive films arranged in the respective anisotropically conductive film-arranging holes in this frame plate and each supported by the peripheral edge about the anisotropically conductive film-arranging hole,

wherein each of the elastic anisotropically conductive films is composed of a functional part having a plurality of conductive parts for connection arranged correspondingly to the electrodes to be inspected in the integrated circuits formed on the wafer, which is the object of inspection, containing conductive particles exhibiting magnetism at a high density and extending in the thickness-wise direction of the film and an insulating part mutually insulating these conductive parts for connection, and a part to be supported integrally formed at a peripheral edge of the functional part and fixed to the peripheral edge about the anisotropically conductive film-

arranging hole in the frame plate, and

wherein the elastic anisotropically conductive film has initial properties that supposing that the total number of the conductive parts for connection is Y, an electric resistance of the conductive part for connection in a state that a load of Y x 1 g has been applied to the elastic anisotropically conductive film in a thickness-wise direction thereof is R_{1g}, and an electric resistance of the conductive part for connection in a state that a load of Y x 6 g has been applied to the elastic anisotropically conductive film in the thickness-wise direction is R_{6g}, the number of conductive parts for connection that a value of R_{1g} is lower than 1 Ω is at least 90% of the total number of the conductive parts for connection, the number of conductive parts for connection that a value of R_{6g} is lower than 0.1 Ω is at least 95% of the total number of the conductive parts for connection, and the number of conductive parts for connection that a value of R_{6g} is at least 0.5 Ω is at most 1% of the total number of the conductive parts for connection.

3. The anisotropically conductive connector according to claim 2, wherein the coefficient of linear thermal expansion of the frame plate is at most 3×10^{-5}/K.

4. A probe member suitable for use in conducting electrical inspection of each of a plurality of integrated circuits formed on a wafer in a state of the wafer, which comprises:

a circuit board for inspection, on the surface of which inspection electrodes have been formed in accordance with a pattern corresponding to a pattern of electrodes to be inspected of the integrated circuits formed on the wafer, which is an object of inspection, and the anisotropically conductive connector according to claim 2 or 3, which is arranged on the surface of the circuit board for inspection.

5. The probe member according to claim 4, wherein the coefficient of linear thermal expansion of the frame plate in the anisotropically conductive connector is at most 3×10^{-5}/K, and the coefficient of linear thermal expansion of a base material making up the circuit board for inspection is at most 3×10^{-5}/K.

6. The probe member according to claim 4 or 5, wherein a sheet-like connector composed of an insulating sheet and a plurality of electrode structures each extending through in a thickness-wise direction of the insulating sheet and arranged in accordance with a pattern corresponding to the pattern of the electrodes to be inspected is arranged on the anisotropically conductive connector.

7. A wafer inspection apparatus for conducting electrical inspection of each of a plurality of integrated circuits formed on a wafer in a state of the wafer, which comprises the probe member according to any one of claims 4 to 6, wherein electrical connection to the integrated circuits formed on the wafer, which is an object of

inspection, is achieved through the probe member.

8. A wafer inspection method comprising electrically connecting each of a plurality of integrated circuits formed on a wafer to a tester through the probe member according to any one of claims 4 to 6 to perform electrical inspection of the integrated circuits formed on the wafer.

THE FOLLOWING IS THE ENGLISH TRANSLATION OF THE ANNEXES TO THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT : AMENDED SHEETS (Pages 146-149)